

H. R. BARKER.

VALVE.

No. 178,709.

Patented June 13, 1876.

Fig. 1

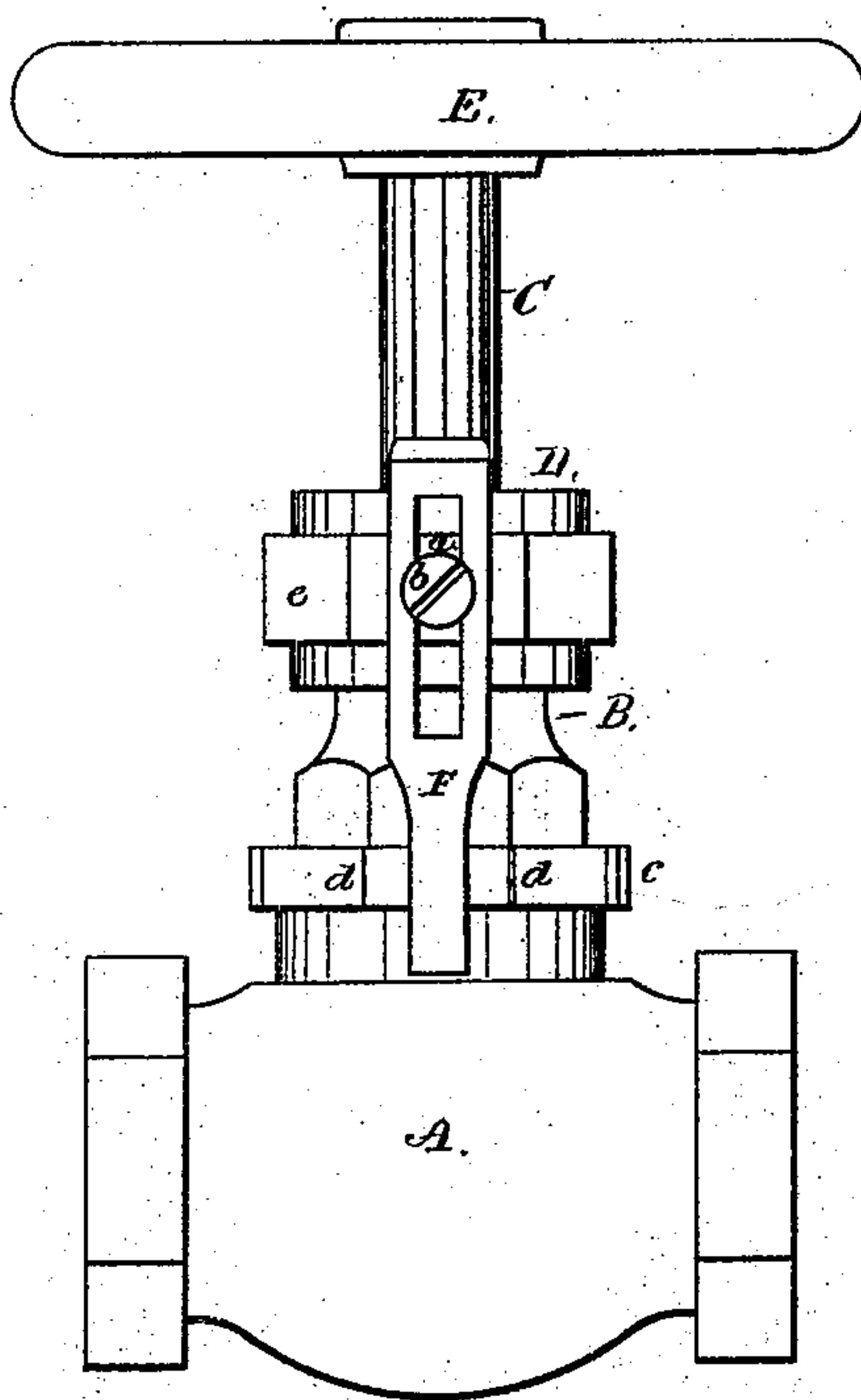
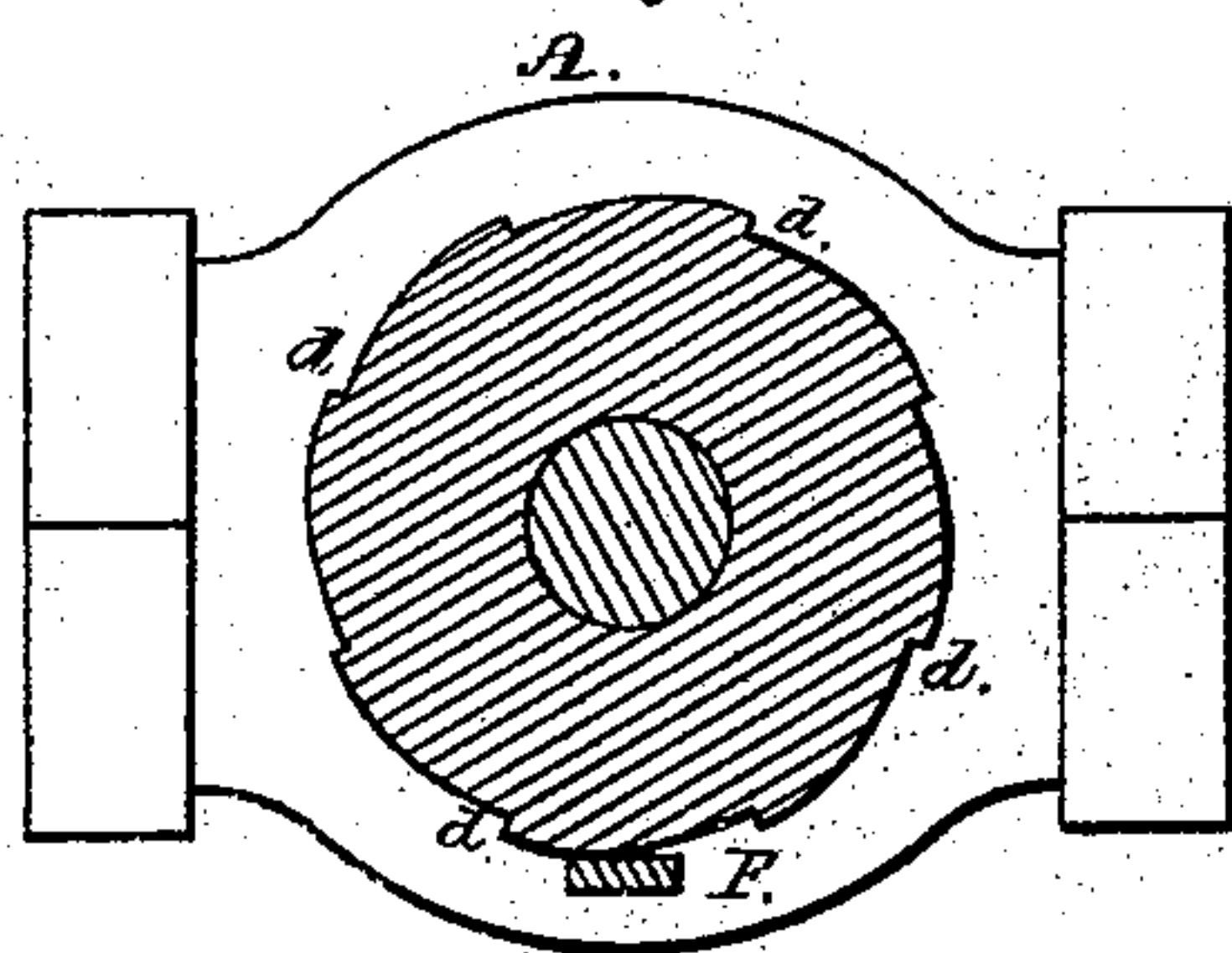


Fig. 2.



Witnesses.

Geo Gray

J. L. Hale

Horace R. Barker.

by his attorney

J. R. Hale

UNITED STATES PATENT OFFICE.

HORACE R. BARKER, OF LOWELL, MASSACHUSETTS.

IMPROVEMENT IN VALVES.

Specification forming part of Letters Patent No. **178,709**, dated June 13, 1876; application filed April 3, 1876.

To all whom it may concern:

Be it known that I, HORACE R. BARKER, of Lowell, in the county of Middlesex and State of Massachusetts, have invented a new and useful Improvement in Valves; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawing, and to the letters of reference marked thereon, which form a part of this specification.

In such drawing, Figure 1 denotes a side elevation of a valve of the ordinary construction provided with my invention. Fig. 2 is a transverse section taken on line *x x* of Fig. 1.

My invention has reference to that class of valves whose plugs are raised off and closed upon their seats by means of rotary movements imparted to their spindles. Valves of this class have their operating spindles or stems extended up through a cap screwed upon the neck of the valve-case, this cap being formed with a chamber, into which the packing is placed in order to make a tight joint around the valve-stem. It has been found in practice that such packing often becomes so consolidated (by screwing the cap down in order to make the joint impermeable to steam and other fluid) as to cause it to adhere to the stem and cap with such tenacity as to unscrew the cap from the neck when the stem is rotated to open the valve or raise the plug from its seat, and thereby allow the issue of steam or other fluid to the great annoyance or injury of the operator.

The object of my invention is to remedy this evil by maintaining the ports in their normal positions; and my invention consists in combining with the screw-cap and neck or body of the case a device for effecting this result, the same being as hereinafter described and claimed.

In the drawing, A denotes the case of the valve; B, its neck; C, the valve-stem; D, the cap, and E the wheel or device for actuating the plug, all of such parts being of the ordinary construction. Affixed to one of the hexagonal faces of the cap D, and extending downward therefrom, is an adjustable metallic arm, F, which is formed with a longitudinal slot to fit upon a rib, *a*, formed on such

face of the cap, a screw, *b*, passing through such slot and into the cap, the head of the screw overlapping the edges of the slot, and serving to confine such arm to the cap. This arm, which I prefer to make slightly elastic, has its lower part resting against an annulus, *c*, formed on or affixed to the neck or body of the valve, such annulus having a series of angular vertical shoulders, *d*, formed on its perimeter, the elasticity of the arm or pawl allowing it to pass readily over the shoulders when the cap is being rotated to screw it down, while any action tending to unscrew the cap forces the arm into contact with the next adjacent shoulder, and thus prevents any further backward movement of the cap.

The object of making the arm F adjustable is to enable the same to be elevated whenever it may be desirable to unscrew or remove the cap from the case.

I would remark that a rod might be passed down through a hole formed in the fillet or flange, *e*, of the cap, and a series of holes be made in the top surface of the fillet or annulus *c*, extending from the neck or body of the valve, to receive the lower end of such rod; but such arrangement is not so easily operated as that first mentioned, as such rod would have to be withdrawn and replaced each time the cap was moved for adjusting the packing.

From the above it will be seen that by my construction of the device, as shown in the drawing, the tightening or adjusting of the packing by screwing down the cap can be as readily performed as if no retaining device were employed, and when the adjustment is attained the retainer maintains the parts in their normal positions.

Having described my invention, what I claim is—

In a valve provided with a rotary spindle, the combination, with the cap and neck or body of the valve, of an adjustable retaining device, F, substantially as and for the purpose set forth.

In testimony that I claim the foregoing as my own invention I affix my signature in presence of two witnesses.

HORACE R. BARKER.

Witnesses:

F. P. HALE,
F. C. HALE.